

Title (en)

METHOD FOR OBTAINING LIGHT EMITTING DIODES RECONSTITUTED OVER A CARRIER SUBSTRATE

Title (de)

VERFAHREN ZUM ERHALT VON ÜBER EIN TRÄGERSUBSTRAT REKONSTITUIERTEN LEUCHTDIODEN

Title (fr)

PROCÉDÉ D'OBTENTION DE DIODES ÉLECTROLUMINESCENTES RECONSTITUÉES SUR UN SUBSTRAT DE SUPPORT

Publication

**EP 3667745 B1 20230322 (EN)**

Application

**EP 18211326 A 20181210**

Priority

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Abstract (en)

[origin: EP3667745A1] The present invention presents relates to the technical field of Light Emitting Diode (LED) devices, in particular of micro-LED ( $\mu$ LED) devices. In this field the invention specifically proposes a method for obtaining one or more LED devices reconstituted over a carrier substrate. The method comprises: providing a silicon-based semiconductor substrate as the carrier substrate; providing, per each of the one or more LED devices, a compound semiconductor stack including an LED layer; applying a SiCN layer to the stack and the substrate, respectively; bonding the stack to the substrate, wherein the SiCN layer applied to the stack and the SiCN layer applied to the substrate are contacted; and annealing, after bonding, the bonded stack and substrate at a temperature equal to or higher than a processing temperature for completing the LED device from the stack, wherein said temperatures are at least 400°C.

IPC 8 full level

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CPC (source: CN EP US)

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